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REMARKS

Claims 37-54 are currently pending. As discussed in the interview, claims 37-40, 44, 45 and 53 are being amended to clarify the claimed invention and not for reasons of patentability.

As stated in the interview, Applicant respectfully submits that a *prima facie* case of obviousness has not been established. Claims 37-54 are not anticipated or made obvious by U.S. Patent No. 6,248,396 to Helf (Helf) in view of U.S. Patent No. 3,907,582 to Walter (Walter) and U.S. Patent No. 5,306,750 to Goodrich (Goodrich). Still further, even if these references are combined with U.S. Patent No. 3,891,585 to McDonald (McDonald), claims 37-54 are not anticipated or made obvious.

These references alone or in combination do not disclose or suggest performing a stability test and a fatigue test on at least one asphalt mixture and then selecting an asphalt mixture for a roadway interlayer **after performing** the stability and fatigue tests and **based on** the results of the stability and fatigue tests, as claimed by Applicant. There is no teaching or suggestion in the cited references of balancing fatigue and stability properties when selecting an asphalt mixture for making an improved interlayer. Applicant's invention is making an interlayer by selecting an asphalt mixture for making that interlayer that has optimal stability and fatigue performance.

As pointed out in the interview, the words "based on" and "interlayer" in the claims cannot be ignored. The words "interlayer" and "based on" must be given weight because they are important in defining the invention. For clarification, independent claims 37 and 45 have been amended to better explain the term "based on". The asphalt mixture for the interlayer is selected **after performing** stability and fatigue tests. This is key because a better interlayer can

be created by selecting an asphalt mixture having optimal stability **and** fatigue performance, and this information is known only **after performing** stability and fatigue tests on at least one proposed asphalt mixture.

As discussed in the interview, the cited references do not suggest **performance testing** at least one asphalt mixture to determine its properties **before selecting** an asphalt mixture to use in making an interlayer. See paragraph 7 of the Declaration of Phillip B. Blankenship (Blankenship Declaration), which is attached as Exhibit A. More specifically, the cited references do not suggest balancing desirable stability and desirable fatigue performance properties when selecting a desirable asphalt mixture for creating an interlayer. See Blankenship Declaration, paragraphs 5-7.


Traditionally, when you create a roadway layer with better stability, you lose fatigue resistance and thus get reflective cracking. See Blankenship Declaration, paragraph 5. Likewise, if you make a roadway layer with desirable fatigue performance, the roadway created tends to rut because it lacks sufficient stability. See Blankenship Declaration, paragraph 5. Because these two properties have an inverse relationship to each other, one of ordinary skill in the art would not think to optimize both. See Blankenship Declaration, paragraph 5. Further, one of ordinary skill in the art would not think to do this by testing the performance of proposed asphalt mixtures followed by selecting an asphalt mixture for an interlayer based on these performance properties. See Blankenship Declaration, paragraph 7. With the present invention, the properties of the interlayer being created are known before it is ever created. By selecting an asphalt mixture with both optimal stability and fatigue performance, rather than just one of these properties, a superior interlayer for a roadway can be created.

As discussed in the interview, the claimed invention is specific to creating an **interlayer**. Stability and fatigue resistance are especially important properties for an interlayer. See Blankenship Declaration, paragraph 6. An interlayer needs to have some flexibility to stop reflective cracking in the base layer from reaching the overlay (a surface layer is not allowed so much flexibility because it must hold traffic directly) while having sufficient stability to support traffic indirectly. It is important that the claimed invention is directed to making an interlayer because one would not necessarily want to optimize the claimed performance properties for a base layer or a surface layer. See Blankenship Declaration, paragraph 6.

One of ordinary skill in the art would not look to Goodrich, Walter, or McDonald for ideas as to how to make an improved interlayer because these references do not even suggest making an interlayer. Furthermore, these references should not be combined with Helf because someone trying to improve Helf's interlayer would have no motivation to look at these references. See Blankenship Declaration, paragraph 6. Still further, none of the cited references provides any motivation to perform both stability and fatigue tests, as claimed by Applicant. See Blankenship Declaration, paragraph 5.

In view of the foregoing amendments and remarks, it is respectfully submitted that the claims are now in condition for allowance and eventual issuance. Such action is respectfully requested. Should the Examiner have any further questions or comments which need be addressed in order to obtain allowance, please contact the undersigned attorney at the number listed below. Acknowledgment of receipt is respectfully requested.

Respectfully submitted,

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re U.S. Patent Application of:)	
)	
Inventors: Phillip B. Blankenship et al.)	Examiner: Eric B. Fuller
)	
Serial No.: 09/893,314)	Group Art Unit: 1762
)	
Filed: June 27, 2001)	Confirmation No.: 2106
)	
For: A SYSTEM FOR REPAIRING)	Docket No.: 506418.0047
DISTRESSED ROADS THAT)	
INCLUDES AN ASPHALT)	
INTERLAYER)	
)	

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION OF PHILLIP B. BLANKENSHIP UNDER 37 C.F.R. § 1.132

I hereby declare as follows:

1. My name is Phil Blankenship. I received both a B.S. and a M.S. in Civil Engineering from University of Kentucky in Lexington, Kentucky. The specialty area of my master's degree was transportation materials. I am a registered Professional Engineer in Kansas.
2. I have over 11 years of experience in road paving design and construction. This experience includes over 8 years of industry experience in designing roads and improving paving techniques and about 3 years of government experience with the Kentucky Transportation Cabinet. I am currently a Platform Technology Leader of Koch Materials Company, a subsidiary of the assignee of the above-referenced application. Throughout my career, I have attended numerous continuing education courses relating to the design of pavement systems. I serve on the National Cooperative Highway Research Program review panel for the National Academy of

Science. I also serve as a friend of the Transportation Research Board committee on Flexible Pavement Construction and Rehabilitation.

3. I am an inventor of the above-referenced application.

4. I have reviewed U.S. Patent No. 6,248,396 to Helf (Helf), U.S. Patent No. 5,306,750 to Goodrich (Goodrich), U.S. Patent No. 3,907,582 to Walter (Walter), and U.S. Patent No. 3,891,585 to McDonald (McDonald). I also have reviewed the March 25, 2004 Office Action from the Patent Office that cites these references and rejects the claims of the above-referenced patent application.

5. Typically, in order to improve the stability of an asphalt mixture, its fatigue resistance must be sacrificed. In contrast, when improving the fatigue resistance of an asphalt mixture, the stability of the mixture must be sacrificed. Accordingly, it is counterintuitive to test both stability and fatigue as one of ordinary skill in the art would assume that one must be sacrificed for the other. Further, one of ordinary skill in the art would not be motivated to optimize both the stability and fatigue performance of an asphalt mixture for a roadway interlayer, as such characteristics are considered opposite extremes.

6. It is significant that the claimed invention relates to making an interlayer and not a surface layer or a base layer. It is particularly desirable to optimize the stability and fatigue performance of an interlayer. In contrast, for example, a surface layer must have such a high stability that it would not be desirable to try to risk failure in order to improve its fatigue resistance. Accordingly, references such as Goodrich, Walter, and McDonald, which do not suggest making an interlayer, are not analogous art to the claimed invention. One of ordinary skill in the art would not look to these references when trying to improve techniques for making an interlayer.

7. Still further, roads typically are not designed by measuring performance properties of one or more asphalt mixtures before selecting the asphalt mixture to be used for making the interlayer. Further, asphalt mixtures are not typically selected based on the measured performance properties. In addition, the desired performance properties typically are not known before performing the fatigue and stability tests. While performance properties of an asphalt layer have been measured after a pavement layer has been laid, there is no suggestion by Helf, Walter, Goodrich, or McDonald to run performance tests on one or more asphalt mixtures and then select an asphalt mixture for use in paving the road after performing and based on the performance tests.

8. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.


Phillip B. Blankenship

Date: May 25, 2004